

〔その他(教育実践報告)〕

Using CORE-econ in an English Reading Course

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Using CORE-econ in an English Reading Course¹

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Abstract:

A CORE-econ project e-book was used in an English reading course in the autumn term, 2016, the spring and autumn terms, 2017 and the spring term, 2018 with the aims of developing rapid reading skills as well as learning to understand economics in English without using translation. This paper reports on how the e-book was used and its effectiveness.

Keywords: CORE-econ, English reading, e-book, economics education

1. Introduction

The primary aims for my English class are to foster rapid reading skills and to understand economics in English without using translation. Students are required to record unknown words for home work.

The CORE-econ project e-book³ was used as the textbook in the class

1 This is a revised version of 'Experience of Applying the CORE-Econ in English Reading Course', Toyama University Faculty of Economics *Working Paper*, No.310, 7 March 2018. It was presented at workshop in UCL (University College London) on 14 March 2018. I would like to thank Professor Wendy Carlin for her warm comment. The Japanese version of the paper was published in *the Journal of Economic Education*, No.37, September 2018, pp.132-135.

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3 The CORE-econ's homepage is <http://www.core-econ.org/>. CORE is 'An open-access platform for anyone who wants to understand the economics of innovation, inequality, environmental sustainability, and more'. 'What is CORE? Accessible, relevant, real-world economics teaching, available and free to everyone. Join us!'

for three main reasons. First, the students could easily access the e-book on their personal computers and smartphones at any time. Second, they could share knowledge with other students in the world through the internet. Third, the book theoretically and historically examined contemporary issues. I used the e-book from Autumn term, 2016, the spring and autumn terms, 2017 and the spring term, 2018. I report on how the e-book was used and its effectiveness.

2. Autumn 2016

In the autumn 2016 term course, the six student participants were all in second year; five were Japanese and one was Malaysian⁴. Before class, the students were asked to read the assigned pages without using a dictionary, after which in class, they reported on the number of unknown words they had found. They then quickly read a paragraph from the e-textbook on the PC screen. In the early part of the term, they read 4 or 5 pages per class, and in the later part of the term, they read 6 or 7 pages per class. Unlike usual English reading class, they did not translate the passages; however, they sometimes explained the figures and tables in Japanese. They also performed quizzes and watched the associated e-book videos.

Over twelve 90 minutes classes, the students read from page 1-29 in unit 1, 'The Capitalist Revolution', from page 12-34 in unit 2, 'Technological Change, Population and Economic Growth', and page 1 and pages 4-31 in unit 3, 'Scarcity, work and Choice'. Therefore in total they read 68 pages, an average of 5.7 pages per class. The records for each student's achievements

4 The student number in every course is shown in Table 6.

are shown in Table 1; the scores are different because of the differences in the students' English language abilities. On average, there were 30.2 words unknown words per class; as there were approximately 187.5 (=750/4) words per page, there were just over an average of 5 unknown words per page or 2.83% (=5.30/187.5). Based on the Laufer' cover ratio⁵, the known word rate was 97.17%; as this was greater than 95%, it indicated that the students were generally able to understand the texts.

Table 1. Unknown words, autumn 2016

	1	2	3	4	5	6	7	8	9	10	11	12	average
A	53	48	44	48	36	x	21	40	x	22	36	36	38.4
B	22	38	34	24	32	18	33	34	x	15	31	34	28.6
C	23	32	38	33	28	x	48	22	10	21	40	x	29.5
D	27	33	31	26	31	x	48	12	13	20	24	27	25.7
E	55	55	49	x	47	23	60	27	18	28	43	43	40.7
F	20	26	23	20	24	13	28	11	5	11	20	21	18.5
average	33.3	38.7	36.5	30.2	33.0	18.0	39.7	24.3	11.5	19.5	32.3	32.2	30.2

In the final class, the students discussed the effects of the e-book, which are summarized in the following.

- 1) The students found the topics very interesting, but they had little knowledge of economic history such as the industrial revolution in England and Japanese history in the seventeenth century.
- 2) The students did not fully understand some of the concepts in Japanese. For example, the production function, average productivity, marginal productivity, the law of diminishing return, opportunity costs, rent, indifference curves and marginal rate of substitution.
- 3) The students found the examples in the book quite easy to understand and tried to understand the economic concepts in English rather than in

5 See Laufer(1992) and Laufer and Ravenhorst-Kalovski (2010).

Japanese.

- 4) The volume of homework and reading in class was seen as suitable.
- 5) Most students were able to understand the book in English without needing to use a dictionary.

3. Spring 2017

In the 2017 spring term course I had 1 fourth year and 6 third year students, 4 of whom had continued from the previous year, including the Malaysian. In this class I spent 60 minutes on CORE-econ and 30 minutes on other activities. Ten classes were focused on CORE-econ, in which the students read units 1, 2, 3 and additionally unit 15, ‘Technological Progress, Unemployment and Living Standards over the long run’. The unknown words by each student are shown in Table 2; the average number of unknown words per page was 4.5.

Table 2. Unknown words, spring 2017

	1	2	3	4	5	6	7	8	9	average
A	35	42	35	42	8	36	25	30	40	32.6
B	34	26	28	26	14	26	17	34	45	27.8
C	36	27	34	24	14	29	19	27	11	24.6
D	58	43	44	34	13	35	28	32	26	34.8
E	22	22	23	17	21	20	10	27	18	20.0
F	71	x	32	23	21	x	x	33	39	36.5
G	29	46	17	30	22	31	x	x	29	29.1
average	40.7	34.3	30.4	28.0	16.1	29.5	19.8	30.5	29.7	29.3
pages	9	9	9	9	3	6	4	9	4	62.0
per page	4.5	3.8	3.4	3.1	5.4	4.9	5.0	3.4	7.4	4.5

Unit 15 was focused on for 4 classes and a guide by Prof. Mizuno from Meiji University was given to the students as reference. The ten-minute

vocabulary tests⁶ that were developed by Dr. Kuida from Nihon University were conducted three times. The average score was 5.0 point, as shown in Table 7.

In the final class, a questionnaire was given to students, the results of which are shown in Questionnaire 1. They indicated that the students found the e-book effective, particularly the explanations of the figures and tables as well as the quizzes.

Questionnaire 1. Questions, Spring 2017

number of sample=7			
Q1 Is "unknown words" effective to you ?			
1	Yes	5	71%
2	No		
3	Not definitive	2	29%
Q2 Is it effective to explain the figures and tables and to try the quizzes?			
1	Yes	7	100%
2	No		
3	Not definitive		
Q3 Is the guide useful ?			
1	Yes	3	43%
2	No		
3	Not definitive	3	43%
4	Not read	1	14%
Q4 Do you want to continue to take vocabulary test ?			
1	Yes	2	29%
2	No	2	29%
3	Not definitive	3	43%
Q5 Is the e-book effective to learn economics in English?			
1	Yes	6	86%
2	No		
3	Not definitive	1	14%

6 The test has ten sentences. Each sentence has one blank which a word should be selected from eleven words.

4. Autumn 2017

In the 2017 autumn term, there were two Japanese, two Chinese and one open-class student in his 70s. In the early term, reading is considered important. In the middle of the term, we had two classes with foreign guests in November. In one class, three professors from India and China gave their small lectures to the students. In another class a Dutch professor gave a lecture and had some discussion with the students. In the late term, the students completed the questions from unit 10, ‘Banks, money and the credit market’. The number of unknown words is shown in Table 3. In the first 5 classes, the students studied unit 1, and from the 6th to the 10th classes, the students studied unit 10.

Table 3. Unknown words, autumn 2017

	1	2	3	4	5	6	7	8	9	10	average
A	37	25	19	32	30	36	27	20	35	31	29.2
B	25	20	25	25	26	22	18	18	25	18	22.2
C	25	20	30	12	x	18	14	13	16	16	18.2
D	29	20	30	21	21	15	8	8	16	29	19.7
E	21	30	27	34	x	16	16	15	18	11	20.9
average	27.4	23.0	26.2	24.8	25.7	21.4	16.6	14.8	22.0	21.0	22.0
pages	12	7	5	7	6	9	9	6	10	7	78.0
per page	2.3	3.3	5.2	3.5	4.3	2.4	1.8	2.5	2.2	3.0	3.1

The vocabulary tests were conducted twice for unit 1 and four times for unit 10⁷. The average score was 6.1 point, as shown in Table 7. In this course, a final examination was conducted using 5 questions from unit 10, with the average examination score being 88. The questionnaire was also completed in the final class, the results for which are shown in Questionnaire 2.

7 In November 2017 the soft cover book, the CORE TERM(2017) was published and reedited the constitute of units.

Questionnaire 2. Questions, Autumn 2017

number of sample=5			
Q1 Is "unknown words" effective to you ?			
1	Yes	5	100%
2	No		
3	Not definitive		
Q2 Is it effective to read a textbook in the early half term?			
1	Yes	4	80%
2	No		
3	Not definitive	1	20%
Q3 Is it effective to explain the figures and tables and to answer the questions in the late half term ?			
1	Yes	4	80%
2	No		
3	Not definitive	1	20%
Q4 Are the two classes of foreign guest speakers useful ?			
1	Yes	5	100%
2	No		
3	Not definitive		
Q5 Do you want to continue to take vocabulary test ?			
1	Yes	4	80%
2	No		
3	Not definitive	1	20%
Q6 Is the e-book effective to learn economics in English ?			
1	Yes	4	80%
2	No		
3	Not definitive	1	20%

From the results, it can be seen that identifying the unknown words as homework, the rapid reading, the explanation of the figures and tables, and answering the questions were all considered effective. Therefore, it was concluded that the e-book was suitable learning for English language students.

5. Spring A 2018

In the 2018 spring term I had two English courses. Spring A is for undergraduates. Spring B is for graduates. In spring A there were 2 students in the 3rd year and 2 open-class students in their 70s. The two undergraduate students had already experienced short stay in USA and could read fluently. But they had not so much knowledge of Economics. The unknown words in home work are shown in Table 4. The average of unknown words were 2 words per pages. The vocabulary tests were conducted two times. The mark point was 7.5 in average, as shown in Table 7. Their English skill was the best among the five classes.

Table 4. Unknown words, spring A 2018

	1	2	3	4	5	6	7	8	9	10	11	12	average
A	8	32	5	16	10	6	7	4	5	7	6	8	9.5
B	15	22	27	19	27	14	21	17	15	29	21	14	20.1
C	9	9	7	x	12	7	7	9	6	x	x	7	8.1
D	11	26	7	26	17	8	8	9	13	18	9	25	14.8
average	10.8	22.3	11.5	20.3	16.5	8.8	10.8	9.8	9.8	18.0	12.0	13.5	13.7
pages	7.5	3	4	8.5	13.5	6	12	9	7.5	12	15	10	9.0
per page	1.4	7.4	2.9	2.4	1.2	1.5	0.9	1.1	1.3	1.5	0.8	1.4	2.0

In the middle term, they watched a video of “Fukushima by BBC”. In addition to reading, questions and exercises were done sometimes. The final examination was conducted using 6 questions from unit 3 and 14. The average score was 81 point.

6. Spring B 2018

In the spring B there were 2 Chinese graduate students. They belonged in the management course of the graduate school. They had not enough knowledge of Economics. And they did not have good English skill. The average of unknown words per page was 13.7, as shown in Table 5.

Table 5. Unknown words, spring B 2018

	1	2	3	4	5	6	7	8	9	10	11	average
A	63	65	63	57	68	77	54	26	22	x	46	54.1
B	85	92	59	64	77	40	32	44	30	20	53	54.2
average	74	78.5	61	60.5	72.5	58.5	43	35	26	20	49.5	52.6
pages	5	3.5	2	3	7	3.5	3	5.5	4	6.5	8.5	4.7
per page	14.8	22.4	30.5	20.2	10.4	16.7	14.3	6.4	6.5	3.1	5.8	13.7

The ten-minute vocabulary tests were done two times. As shown in Table 7, the mark point was 4.3 in average, which was lower than that of the spring A class. The unknown words were relatively much. It needed time to read and understand the text. It was difficult for them to read and understand quickly. Therefore, I added some complementary explanation in Japanese. In this case, careful and repeated reading was effective for them to understand economics.

7. Conclusion

I had five courses during 2 years. As shown in Table 6, the total number of students is 24, in which 2 Malaysian and 4 Chines are included, and their grades are different from the 2nd year to graduates. Their English skills were different from person to person, as shown in table 1 to 5, and from course to course, as shown in table 7. I used CORE-econ to learn economics in English. I tried rapid reading method with some teaching devices in class and class.

Table 6. Student number

	2nd	3rd	4th	graduate	elder	total	Japanese	Malaysian	Chinese
Autumn 2016	6					6	5	1	
Spring 2017		6	1			7	6	1	
Autumn 2017		4			1	5	3		2
Spring A 2018		2			2	4	4		
Spring B 2018				2		2			2
total	6	12	1	2	3	24	18	2	4

Table 7. Vocabulary Test

	Average point	Test units					
Spring 2017	5.0	U15.0	U15.1	U15.2			
Autumn 2017	6.1	U1.1-1.2	U1.3-1.5	U10.1-10.3	U10.4-10.6	U10.7-10.9	U10.10-10.12
Spring A 2018	7.5	U1.1-1.2	U1.3-1.5				
Spring B 2018	4.3	U1.1-1.2	U1.3-1,5				

In the rapid reading exercises it was found that many students were able to read the assigned pages without needing to use a dictionary, and at the same time were able to gain a good understanding of economics while reading in English; therefore, the use of this e-book was found to be suitable for the English language students.

While this was a comprehensive study on the use this resource, this sample was very small. Therefore, in a larger class, it is possible that another rapid reading method and other ways of understanding economics may be needed.

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